

c) REMARKS

The claims are 1, 4-19, 24 and 25 with claims 1, 4, 12, and 25 being independent. The claims have been amended to better define the intended invention and reconsideration thereof is expressly requested.

Support for the amendment to claims 1, 4, 12 and 25 is found, inter alia, on page 11, lines 2-7 and 18-22 and on page 48, lines 5-12.

Claims 1, 4-19 and 24 were rejected under Rule 112, first paragraph, as lacking a written description regarding “partially hydrolyzed” materials. Without agreeing or disagreeing and solely to expedite prosecution, claims 1, 4, 12 and 25 have been amended to delete the term “partially.”

Claims 1, 4, 5, 7, 9-13, 15, 17-19, 24 and 25 were rejected as obvious over Bruinsma '299 in view of Miyata. Claims 6 and 14 were rejected as obvious over the same references further in view of MacDougall '266. Claims 8 and 16 were rejected over the same references, further in view of Fuchs '784. The grounds of rejection are respectfully traversed.

In the present invention, a non-ionic surfactant is employed in a solution containing hydrolyzed silicon compound. When employing a non-ionic surfactant, a mesoporous material is formed with microholes linking the mesopores. This permits ink, polymer or the like to fill the mesoporous material via the microholes.

The prior art references employ a quaternary ammonium cationic surfactant, such as CTAC, cetyltrimethylammonium chloride or variations of CTAC, see column 7, lines 40-51 of Bruinsma '229; Lu, page 365 (CTAB); Yang, p. 704 (CTACl); Miyata, p. 1610; Inagaki, p. 681; and Ogawa, p. 1149. Applicants have found that when employing

an ionic surfactant, microholes are not formed. In present Example 1, polyoxyethylene-(10)-hexadecylether [C<sub>16</sub>H<sub>33</sub>(CH<sub>2</sub>CH<sub>2</sub>O)<sub>10</sub>OH] was the non-ionic surfactant. When using a non-ionic surfactant having a hydrophilic group (as polyethylene oxide), it becomes possible to carefully control the pore diameter within broad ranges in comparison to an alkylammonium type cationic surfactant as employed in the references of record.

Accordingly, use of the non-ionic surfactant offers special advantages over the conventional quaternary ammonium cationic surfactant providing better filling of the mesoporous material with ink, polymer or the like. Wherefore, the claims should be allowed and the case passed to issue.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



Attorney for Applicant

Registration No. 24947

FITZPATRICK, CELLA, HARPER & SCINTO  
30 Rockefeller Plaza  
New York, New York 10112-3801  
Facsimile: (212) 218-2200